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10/678,782	10/03/2003	Richard R. Roesler	PO-7926/MD-99-44	3887
157	7590	02/13/2006	EXAMINER	
BAYER MATERIAL SCIENCE LLC 100 BAYER ROAD PITTSBURGH, PA 15205			TRUONG, DUC	
			ART UNIT	PAPER NUMBER
			1711	
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/678,782  
Filing Date: October 03, 2003  
Appellant(s): ROESLER ET AL.

**MAILED**  
FEB 13 2006  
**GROUP 1700**

BAYER MATERIAL SCIENCE LLC  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 12/05/2005 appealing from the Office action mailed November 3, 2005.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wicks'012 (5,243,012) or Zwiennen'741 (5,236,741) or '170 (5,126,170).

Wicks discloses a polyurea coating composition comprising at least one compound of the formula (I) by reacting primary polyamines of formula (II) with maleic or fumaric acid esters of formula (III) under cited conditions (See col. 4, line 50 et seq., col. 5, lines 7-47) in that they are identical with step (A) in the claimed process 2.

The reference further discloses a coating composition comprising a polyisocyanate (see Abstract, col. 1, line 47 et seq.) and said compound, as stated above, to form a binder (see col. 6, line 23 et seq.), polyurethane and polyurea coatings---(see col. 6, line 65 et seq.).

Zwiennen'741 or '170 discloses an isocyanate reactive component containing at least one compound of the formula (I) by reacting primary amines (II) with maleic or fumaric acid esters of formula (III) under cited conditions (see col. 4, line 38 et seq. of '741; col. 4, line 31 et seq. of '170; col. 5, lines 4-20 of '741; col. 4, line 64 et seq. of '170), in that they are identical with step (A) in the claimed process 2.

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The references further disclose a process for the production of polyurethane coatings, binders (see col. 6, line 1 of '741; col. 5, line 60 of '170) using said component.

The disclosures of the references differ from the instant claims in that they do not disclose the claimed formula derived from the reaction products of primary amines with maleic or fumaric acid esters then with an oxirane compound comprising alkylene oxide.

However, the references do disclose the reaction products of primary amines with maleic or fumaric acid esters under the same conditions. Further, the references do disclose the use of polyether polyols produced by the alkoxylation of starting materials, and suitable for the preparation of the isocyanate group containing prepolymer and semi-prepolymers, comprising alkylene oxide such as ethylene and/or propylene oxide which may be introduced into the alkoxylation in any sequence or as a mixture (see Wicks, col. 4, lines 28-41; col. 3, line 60 onto col. 4, line 4 of '741; col. 3, lines 53-65 of '170).

Therefore, it would have been obvious to one of ordinary skill in the art to react the reaction products of primary amines with maleic or fumaric acid esters then with alkylene oxide to form the aspartate of the claimed formula, for the reasons as stated above, in the absence of a showing of unexpected results derived from said selection.

#### **(10) Response to Argument**

Appellant's arguments are characterized as based on the claimed step (B), in that the polyhydroxy compounds of the references are used to make isocyanate group

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containing prepolymers with polyisocyanates and do not react with the resulting product in the claimed step (A) in claim 2.

Note that the aspartate of the claimed formula is derived from the process of claim 2.

Note also that the references do disclose the required reactants and the process conditions in the claimed step (A). Therefore, the question is whether ethylene oxide or propylene oxide can react with the resulting product of step A.

Note that the references do disclose "polyether polyols are obtained by the alkoxylation of suitable materials and are suitable for the preparation of the isocyanate group containing prepolymers and semi-prepolymers---ethylene oxide and propylene oxide are suitable alkylene oxides for the alkoxylation reaction. These alkylene oxides may be introduced into the alkoxylation reaction in any sequence or as a mixture (see col. 4, lines 29-42 of '012; col. 3, line 60 onto col. 4, line 4 of '742; col. 3, lines 53-65 of '170). In the case if the amount of alkylene oxides used to form polyether polyols is in excess, after forming polyether polyols, the remaining alkylene oxides can react with the resulting product of step (A)

Note that the references do disclose that "the prepolymers and semi-prepolymers may suitably be prepared from low MW polyhydroxy compound such as polyethylene glycol, propylene glycol---, low MW ethoxylation and/or propoxylation products of these polyols(see col. 3, line 63 et seq. of Wicks; col. 3, lines 27-35 of '741; col. 3, lines 20-28 of '170) in that ethylene glycol and propylene glycol can be used as reactants to form prepolymers and semi-prepolymers. The use of the term "prepolymers or semi-

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prepolymers means the alkylene oxides can react with another component in any steps of the process, including steps A and B.

Appellants' arguments are also based on a related application, Application Serial No. 10/678,491 in that the claims have identical step A and reacting the resultant product of A with caprolactone, ethylene carbonate or propylene carbonate. The claims have been allowed based on the reasons that the references do not disclose the use of caprolactone, ethylene carbonate or propylene carbonate as reactants. The closest reactants in the references are hydroxyl group containing polylactones, polycaprolactones (see col. 4, lines 25-27 of Wicks; col. 3, lines 56-58 of '741; col. 3, lines 49-52 of '170); hydroxyl group containing polycarbonates (see col. 4, lines 42-46 of Wicks; col. 4, lines 5-10 of '741; col. 3, lines 66 onto col. 4, line 3). These reactants contain hydroxyl group and react with the resultant step A under different mechanisms.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Duc Truong



Conferees:

James Seidleck,



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David Wu 